# THE EXTENT OF NON-MARITAL FERTILITY IN SOUTH AFRICA

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## Introduction

An increase in non marital fertility has been observed in all rich countries of the OECD, except for Japan (Willis and Haaga, 1996). Increasingly research in developed countries show that rates of out of wedlock childbearing are higher among younger women especially in their teens and early 20s, among women with lower educational attainment, and also among subgroups with lower socioeconomic status (Alexander and Guyer, 1993, Willlis and Hagga, 1996, Wu and Martin, 2002). The same trend is being observed in developing countries, although the pace of increase is reported to have started later. The prevalence of premarital fertility ranges from very low levels of 0.6 % in Ethiopia to 58% in South Africa. The average prevalence in Sub-Saharan Africa is 16 % (Garenne and Zwang, 2003). Evidently South Africa has rates ranging among the highest in the world.

There is currently a small difference between marital and non marital fertility in South Africa, and significant differentials can be observed by population group and rural/urban residence. Total Fertility Rates (TFR) for never married women was shown to be 3.4 in 1994, which was almost as high as that for married women (Chimere-Dan, 2001). The analysis of 1996 census conducted by Udjo (2000) confirmed this finding and indicated that TFR differences between married and non married women are small (the difference is about 27%), particularly for the African population compared to other population groups. Furthermore , Garenne et al (2000) have elaborated this using the data from a Demographic Surveillance System (DSS), and found that age specific fertility rates depict a pattern of premarital childbearing that is highest among teenage girls, and

that exceeds marital fertility between age 20 and 24. Premarital childbearing accounted for almost all births among women in their teens in their sample. This has confirmed the argument that South African fertility relies less on marriage than most other African countries.

Udjo (2001) conducted a study on marital patterns and fertility in South Africa using the Census of 1996 and attempted to look at factor affecting non-marital fertility. He compared marital TFR with total TFR and concluded that differences between marital TFR and total TFR are inflated by high rates of childbearing in cohabiting unions. When cohabitation was taken into account, the difference between marital and non-marital fertility was reduced from 29% to 9% indicating that most of the non marital childbearing occurs within cohabiting unions. Studies among Africans have shown that cohabiting relationships mainly consists of individuals that have commenced marriage negotiation process (Steyn and Rip, 1969). Therefore women in such relationships resemble more those in marital unions rather than never married women. For this reason, this study focuses only on never married women who are not in cohabitating unions in order to purge out the effect of cohabitation on childbearing.

In recognition of the lack of understanding on the changing dynamics on family formation, the World Fertility Surveys (WFS), and the Demographic and Health Surveys (DHS) have changed their principal respondents from focusing only on married women ages 15-49 to including unmarried women of the same age. This allows a comprehensive study of fertility as it includes all women at risk of childbearing irrespective of their union status at the time of the survey.

Sociological research on women's position in the society has focused on the importance of granting women rights to make decisions regarding their reproductive lives (Mason, 1987). This is seen as step towards granting women autonomy and countries that have policies that protect such right are generally perceived as progressive. One would then wonder why there is a growing concern on women choosing to have children out of marital unions, which is well within women's empowerment on their decision making. One of the overarching concerns about non marital childbearing is on its propensity to increase single parent households. Such households tend to be characterized by high levels of poverty, poor health outcomes and poor education attainments for children (Lloyd and Desai, 2000). Furthermore more concern is with the effect that premarital fertility has on the spread of HIV. The prevalence of casual partnership patterns is much higher among unmarried persons compared to their married counterparts, which facilitates in the spread of the pandemic. Studies have also documented that most of the childbearing among unmarried women is unwanted (Chimere-Dan, 1998, Moultrie ad Timaeus, 2002, Swartz, 2002). This suggests that there is unmet need of family planning services in the population. Either women do not have access the services, or in cases where they are accessible there is lack of use, or consistency of use. Furthermore persons with non marital births are at higher risk of contracting the virus given that they do not use protective measures or do not use them effectively. Garenne and Zwang (2003) demonstrated that in a smaller rural setting that has high HIV prevalence, there is a strong relationship between premarital pregnancies and the risk of contracting HIV, women who are at higher risk of having a non marital pregnancy tend to have a higher risk of HIV infections. This gives evidence that non marital childbearing may not be characterized

under the umbrella of improving women autonomy, rather as an indication that women are marginalized.

**Factors affecting non-marital childbearing**

Sub-Saharan Africa society is currently characterized by later mean age at first marriage (SMAM), and lower rates of marriage in general (Garenne et al, 2000). These factors have been sited as one of the factors that perpetuate the increase in non-marital childbearing. However non marital childbearing has been high in South Africa since the early 1960s. Longmore (1959), and Steyn and Rip (1968) published one of the first papers that reported the prevalence of non marital childbearing among the African group in South Africa in the early 1960s. They proposed suggested several theories that explain determinants of out of wedlock childbearing among this group. Their work and that of others at the time concluded that non marital childbearing is high among the Africans compared to other race groups, i.e. Whites and Coloureds (Indians were never analyzed at the time probably due to small sample sizes). These studies argued that non marital childbearing among the Africans is high due to cultural norms that put very limit to sexual relationships, and encourage women to have children out of wedlock. There have also been arguments that due to the patriarchal structure of the society and high value of childbearing, women are often required to prove that they are fecund prior to marriage. Often it has been argued that due to the high value of bride price (*lobola*), men want to invest their wealth on women they are sure can bear them children (Stein and Rip, 1968). Furthermore some arguments have been made that the increasing urbanization among the

African population has weakened traditional societal norms that regulated sexual practices, i.e. norms such as lack of monitoring of young unmarried women, and community participation in the transition to adulthood of younger women, which was more predominant in the past. Later in the 1980s, further studies of such nature were conducted incorporating more urban settings. These studies have made similar findings, but have emphasized "loss of social control" (Preston-Whyte et al, 1990) among the African population as a source of increasing sexual interaction and thus non-marital fertility. Generally, all the theories posed focus on cultural factors as key determinants of non marital childbearing among Africans, and that these factors explain explicitly the difference in levels of non marital childbearing between Africans and other population groups. These studies however are all qualitative in nature, which limit generalization to the greater African population. Furthermore, where socioeconomic factors have been incorporated in such studies, they have been in the context of consequences of non marital childbearing, and no study has explored these factors as determinants. The emphasis on comparing the observed patterns of childbearing with traditional African culture has also meant that, when urban areas have been studies, it has been in the context of comparing the impact of weakening traditional norms on sexual behavior, rather than exploring the emerging factors that are prevalent at the time. Increasing women's education has increased women's autonomy and thus decreases their reliance on men. This implies that women who are highly educated will be less likely to rely on men and to risk a non-marital birth in order to prove their fecundability prior to marriage. In general, the literature on assortative mating has suggested that education is one of the important factors that affect mate selection process, where highly educated people tend to

marry each other (Lewis, 2000). It is then expected that as education level (as one measure of SES) of women increase, non marital childbearing will become less prevalent.

One of the key hypotheses for this study is that Africans have a higher risk of having a non-marital childbirth compared to non Africans. However, most of this variation can be reduced if these groups had similar socioeconomic status (SES). This is against the argument that the reason for an increase in prevalence of non-marital childbearing among Africans can be exclusively explained by the phenomenon of weakening traditional cultural practices that discouraged sexual activities outside of wedlock. Rather, that it is consistently lower SES that has increased the gap between Africans and non-Africans. There has been supporting arguments that non-marital childbearing is an indication of survival strategy for women who are in low SES. This argument stems from that these women depend on men for economic stability, and since childbearing is still valued by men as a symbol of social standing this is a tool that women have at their disposal (Preston-Whyte, 1990, 1993, Chimere-Dan, 2001).

This argument has been supported by several literature that looks at the impact of South African past migration laws on household living arrangements (Posel, 2001). In 1950 South African government passed the Group Areas Act, which segregated the population both racially and geographically. This Act developed areas that became as the Bantu Stants, which were areas where the majority of the African population were resident. Populations from these areas had restricted movements in and out of the White dominated residents that usually were urban areas. These areas were the highest concentration of economic activity in the country and migration of Africans typically moved from rural settings to these urban settings in search of employment. However, the

act imposed restrictions on who could move. Male were typically the migrants and they were not allowed to migrate with their families. The impact on this on family structure has been documented. Research has found that this generated family formation patterns where men leaved their wives in the rural areas, and resided in urban areas where they tended to form other relationships, and established other families. The tendency for these men to marry their urban partners was less, since they already have wives, resulting into high out of wedlock childbearing in areas where migrants are concentrated (Posel, 2001).

Although non marital fertility is high in all age groups, it is reported to be highest among teenagers. Some have argued that this is so because childbearing for school going children is institutionalized in South Africa (Preston-Whyte, 1988). Unlike most African countries, pregnancy does not necessarily result to the end of education in South Africa. Children are allowed to return to school after childbirth. This has been the basis for the argument that teenage and out of wedlock childbearing is socially condoned in South Africa. However Kauffman (1998) has shown that children who do give birth during their schooling career tend not to return to school due to childcare responsibilities. Furthermore, those that do return to school tend to have high absenteeism rates, which lead to poor education outcomes. Based on this, it is argued that school attendance competes with childbearing. It is hypothesized that women who are attending school are less likely to have a non marital child birth compared to women who are not in school.

**Data and methods**

This study uses the first wave of the South Africa Demographic and Health Survey of 1998. This is a nationally representative survey of households with the intention to collect information from women in their reproductive ages. DHS is a useful source to understand women's child bearing behavioral patterns. The survey is a representative sample of 11, 735 women between ages 15 to 49. Information collected provides enough insight into the marital patterns of women and timing of their fertility.

To understand non marital fertility from this sample a number of restrictions were made after which as sample of 3,877 women was used for the analysis. Firstly, the period of observation is restricted to five years prior to the survey. This is done to understand non marital childbearing in the current period rather than childbearing that might took place a number of years before. Secondly the sample was restricted to women who have never at the time of the survey. This creates bias given that some women (n=56), were never married at birth at the start of the observation interval, and married by the date of the survey. These women are not included in the sample. Because the interest it to ensure Divorced and widowed women have different childbearing trajectories as women who have never married. Thirdly, the sample was restricted to woman who either did not have a birth or had their first birth in the last 5 years. This eliminated women who had births of higher order during this time, and women who did not have a birth but have had one prior to the period of observation. Fourthly, women above age 29 were removed from the analysis. The mean age at childbearing in South Africa is 25, and childbearing is a high due to high value on children, therefore women who reach age 30 not having had a birth might be a selected group that may not be similar to the general population. This study therefore aims at looking at the risk of having a non marital first birth for never married

women between 15 and 29. Women who were cohabiting at the time of the survey were not included although they might be at risk. As has been show above, non marital childbearing is inflated when women in cohabitation unions are not included as never married (Udjo, 2001). Die to lack of measure of the date at cohabitation, which would have been able to determine whether the woman was cohabiting at the time of the interval, these women were not included in the sample. The assumption is that women were cohabiting at the time of the survey were also cohabiting 5 years before the survey. This clearly introduces a bias downwards in the estimates of non marital childbearing if most of these women had births before cohabitation and cohabited soon after, and this bias should be noted in the results, although it is less likely in the South African case where cohabiting union are predominantly started by paying of bride price rather than by pregnancy or birth (Steyn and Rip, 1969). Women in cohabiting unions have also been shown to have characteristics similar to that of women in marital unions (Bumpass, 1989), and cohabitation is most likely to mark that the process of marriage initiation has started, in which case this living arrangement resemble that of marriage (Preston-Whyte, 1988).

[TABLE 1 ABOUT HERE]

The distribution of the sample is shown in table 1. Over half of the sample consists of women in their teen, which forms slightly more than a quarter of women giving birth prior to wedlock. For purposes of this study, the White, Colored (which is a result of mixed relationship between Africans and Whites) and Indian population were grouped together due to small sample sizes that could not permit individual analysis.

Although this creates biases given that there groups have different demographic and socioeconomic trajectories, grouping them together helps understand the differences between Africans compared to the other groups. It has also been shown that with regard to fertility behavior, Whites and Indians follow a similar pattern of low fertility and high marriage prevalence and Africans have much higher fertility and lower marriage rates. Coloreds tend to be in between these groups, therefore it is worth noting that grouping them with Indians and Whites might introduce bias that could underestimate the gap between Africans and Non-Africans. Rural/urban residence already shows an interesting picture, that even though over half the sample resides in urban areas, more people in rural areas than in urban areas had their first birth out of wedlock.

Several methods were employed to explore the effect of socioeconomic status, race and area type on non marital childbearing.

*Prevalence of non-marital childbearing*

The initial attempt at looking at the problem was to compute prevalence rates based on the data. This was a crude measure that used the whole population at risk without adhering to the restrictions outlined above. This was done to get the population level measure of non marital childbearing without limiting to first births, and to never married women. The enumerator of these rates is the population that had non marital birth, non marital includes never married, divorced and widowed. This measure is employed to get the actual population measure of non marital childbearing. The variations by population group are types and other woman's characteristics are

*Life tables*

Life tables were created to estimate the probability of not having a premarital birth. These are simple life tables based on the distribution of women who started the period of observation never married and having zero parity. Age in this case is the age of the woman 5 years prior to the survey. The event is having a birth during the period if observation. Since birth histories were collected, it is possible to know if a woman had a birth in the last 5 years and timing of the birth

*Creation of a socioeconomic index*

Since socioeconomic status is one of the key measures of interest, effort was made in the creation of the more robust socioeconomic status index that will best capture the effect of differences in household socioeconomic status on the probability of having a non marital birth. Grouping together items and giving them equal values has been shown to result in indices that do not capture the effect of each measure on the index (Duncan, 1984). More research has focus on creating and perfecting socioeconomic indices such that one has a few options to choose from (Montgomery et al, 2000; Dunteman, 1989; and Filmer and Pritchett, 2001).

The method chosen for this study is Principal Component Analysis (PCA). This method transforms a large number of variables that are believed to combine into one measure and form smaller number of uncorrelated factors that keep the information from these variables. PCA is useful here because it assigns weights to variables, such that the

components created explain most of the variation in the original variable and can then be used as representing them. The number of components created is based on the relationship of the original variables with one another. The first component is the linear composite of all the variables combined and is calculated as:

$$y = a_{12} x_1 + a_{12} x_2 + \ldots + a_{1k} x_k = \Sigma a_{1i} x_i$$

The second component is orthogonal, i.e. it is conditional on the first component and has the same structure. These components are independent and the weights for each sum up to one. The first component explains more variation compared to the subsequent components and is typically the one analyzed.

The variables used to create the socioeconomic index are presented in table 3. Also presented are sample means and standard deviations of each variable. In order to establish which variables load highly on which factors, the rotated component matrix was restricted to loadings above 0.5. This showed that variables associated with facilities that household has access to, i.e. water source and toilet facility loads highly with factor 1. Household amenities, i.e. whether household has radio, car, television, refrigerator and telephone load highly on factor 2, and house structure, i.e. wall and floor material loaded highly with factor 3. The third factor is not presented. Due to the nature of the outcome of interest, factor 2 is the most factor that is expected to have the highest effect. The factor that weighs household amenities highly is expected to have the highest impact on premarital childbearing since it is accounts for greater variation that might exist in urban settings where households will tend to have all of the other factors. Factor 1 and factor 2

together explains 24% and 20% of the variation in the variables used respectively, together explaining 44%.

Table 3 shows that variables that have high loadings on the factor tend to indicate better socioeconomic status, and lower indicates lower SES. However, negative values also indicate better socioeconomic status, and because of this these values were removed when the scale was rearranged into various SES levels since they were in conflict with the ranking.

*Multiple regression analysis*

Multiple logistic regression models were estimated to estimate the probability of having a non marital first birth. The dependent variable is whether the woman had a birth or not, it is a dichotomous coded as 0, if she did not have a birth and 1 she had a birth. Binary logistic regression modeling is suitable for dichotomous dependent variables and categorical, and numerical independent variables. This model estimates the coefficients in the form of odds using the formula:

$$In\left(\frac{p}{1-p}\right) = b_0 + b_1 x_1 + \ldots b_n x_n$$

Where p is the probability of experiencing an event, in this case the probability of experiencing a non-marital birth. $X_I$ is the independent variable (i=1…8), $b_0$ is the constant, and $b_i \ldots b_n$ are regression coefficients. Binary logistic regression is used in order to establish the odds of having a first birth controlling for several covariates believed to have an effect. Odds ratios are presented.

Models I to IV report the probability of having a non-marital first birth for never married women. Model I tests the affect of population group and area type without controlling for other factors. This is done to see the direct effects, and observe how they change when other factors are introduced in the model. Model II introduces characteristics of the respondent, i.e. whether the respondent is in school, and her current level of education to test their effect on non marital childbearing, and observe the change they make on the odds for population group and area type. Although education is a proxy for SES, here it is used as a socio-demographic characteristic of a woman, and has very little to add on her socioeconomic status. Model 3 introduces the SES measure constructed from PCA discussed above. This is introduced firstly to see its effect on odds of having a non-marital birth, and secondly to observe how the odds for race and area type changes. As hypothesized, odds of having a non marital childbearing are expected to decrease by population group (Africans being the reference category), before introducing SES measure, but are expected to reduce in size (get closer to zero) when SES is controlled for. Model 4 takes into account that the effect of population group is mediated by SES in the population as indicate above that because of long standing racial segregation, SES is not random across races. The effect of race is then expected to further weaken when an interaction effect of race and SES is introduced in the model. To test for the fitness of the model, Log Likelihood Ratios (LLR) are presented. LLR is a Maximum Likelihood Estimation summary statistics of the $\chi 2$ significance with its degrees of freedom. All models are statistically significant. Since these models are nested, the LLR can be compared from one model to another to establish if the fit improves. As shown in model IV fits better compared to previous models.

Model 3 and model 4 were repeated for the sample that have been residing in the same household during the whole period of observation. The SES measures used in this study are household level measures taken at the time of the survey. Although female migration is not high in South African population, it is possible that women move residential settings after non marital childbearing. In which case the SES measure being used is not for the household where the woman was resident when she had her birth, which is what is hypothesized to affect the risk of having a birth. To test whether the results change depending on whether the woman moved or not, the analysis was repeated only for women who did not change households in the past 5 years. This is the sub-sample that had their first birth in the same household where they are currently residing.

**Results and discussion**

The total non marital prevalence rate suggests that about a quarter of women in their childbearing ages had a birth prior to marriage. This is a high rate in African setting where most childbearing within unions. Prevalence of non marital childbearing seems highest among women between ages 20-24 as shown in table 2. These women have 40% prevalence rate, indicating that this is the prime of childbearing in South Africa. Teenagers seem to have a lower prevalence rate as often sited (Preston-Whyte, 1994). They have a 14% prevalence rate, although this does not control for parity, these women are more likely to be experiencing these births as their first. A very interesting and unexpected finding is that Africans and non-Africans have almost the same prevalence rate if non marital childbearing. This is an unexpected finding given that one of the

hypotheses is that Africans have much higher non-marital childbearing than non-Africans. There are several reasons for observation, firstly divorce rates have increase among the non-African population more than the African population, which may inflate the number of women exposed to childbearing more for these groups while the denominator for Africans are changed only slightly. Secondly since the dominator uses the total population of women age 15-49, if non marital childbearing almost only occurs in younger ages, and widowhood occurs mostly in older ages, then the effect of both will bias the prevalence rate upwards, which is the case for non-Africans. Thirdly due to high rates of female morbidity and mortality in reproductive ages due to HIV/AIDS (Dorrington, 2001) then the estimates of Africans (who are mostly affected by the epidemic) will be biased downwards if mortality is not taken into account, since women who are in later stages of the diseases tend to be infecund. Rural and urban settings have a higher prevalence rate than urban areas, which together with lower SES in these areas, the existence of unmet need of family planning, cause by lesser access to services could be having some effect on these results.

[TABLE 2, ABOUT HERE]

The differentials by level of education show that individuals with no education as expected have a higher prevalence of non marital childbearing compared to other levels of education. Surprisingly the prevalence does not decrease with the level of education. This was tested in the multivariate analysis and the results show that education does not have a significant effect on the odds of having a non marital childbearing. This could be

confirming the literature that suggests that South African population increasingly choose to have children out of wedlock such that those that do are not significantly different from those that do not by level of education. However women who are not currently attending school have a higher prevalence rate, which is expected given that school attendance competes with family formation.

[Figure 2, about here]

Figure 1 and 2 indicate the results of cumulative survivorship probabilities of having a non marital birth estimated from the life table. As expected the probability of having a non marital first birth is higher for rural women and also for Africans. Rural women have a much higher probability of having a birth for urban women, and the difference increases. Africa women in rural areas have the highest probability if having a non marital birth compared to all other groups. The two curves, i.e. for the Africans and for rural women together are lower than all other groups. This is in the expected direction as stated in the introduction that since rural women tend to have less access to family planning programs, this affect their ability to control their fertility effectively.

Also in the expected direction are the estimated differences in the risk for Africans and non-Africans. Non Africans seem to have much higher probability of not having a non marital birth. This is in line with the hypothesis that Africans have higher non marital childbearing than non Africans. These results show this differences more than shown by prevalence rates in table 2, mostly because these probabilities are limited to 5 years before the survey as opposed to never married women which the prevalence

rate were not. The survivorship probabilities presented here are cumulative. The survivorship probabilities also take into account cumulative fertility giving weight to the age at which women are having those ages, and thus are more robust that prevalence rate.

[FIGURE 3, ABOUT HERE]

Figure 3 shows the survivorship probabilities by the socioeconomic index. The results are in line with the hypothesis that the risk of non marital childbearing varies with SES. Women living in households with highest quartile have the lowest risk of having non marital birth. The shape of their survivorship function is different, showing that they have much lower cumulative risk of non marital childbearing. This should be treated with care since childbearing among high SES is also low in general, so this could be showing that the little childbearing that does occur among this subpopulation occurs within marital unions.

The results from logistic regression models are presented in table 4. The models presented aim to examine the effect of several factors particularly population group and area type on the probability of having a non marital birth controlling for other factors, most importantly SES. Model I looks at the effect of population group and area type only controlling for age. The age of the women shows that the odds of having a non marital birth is higher for all ages compared to teenage women. This supports the life table survivorship probabilities. As expected and consistent with the life table probabilities, Non-Africans are less likely to have a non marital first birth compared to Africans. Also living in a rural area increases the odds of having a non marital childbearing.

Model II introduces controls for factors that compete with having a non marital birth. These factors are in expected direction, showing that being in school reduces the odds of having a premarital childbirth, and also being employed has the same effect. School attendance is measured at the time of the survey, the assumption made therefore is that someone who was in school at the time of the survey was attending school 5 years before the survey, and that individuals not attending at the time of the interview were not attending 5 years prior to the survey or at the time of birth. This has a potential to create bias given that some women may not be attending at the time of the survey, when in fact they were attending at the time of birth, which in this case the estimates for school attendant will be inflated. Introducing these factors in the model did not change the odds for population group and area type much. It has however reduced the odds for non Africans by about 23%, meaning controlling for differences in school attendance and employment status further decreases the likelihood that a non African will have a non marital birth compared to Africans.

Model III introduces the measure of SES to control for differences in economic status on the probability of having a birth. Controlling for SES reduces the odds for non Africans by about 17%. This means SES does have a buffering effect suggesting that differences in the likelihood of premarital childbearing between Africans and Non-Africans exists, but the difference is lowered when SES differences are controlled for. It was hypothesized that women who have lower economic status will have higher odds of having non marital childbearing. The results confirm this, women in highest quartile has the lowest odds of having a non marital childbirth. The differences between employed and unemployed women is reduced slightly after controlling for SES.

Unemployment is very high in South Africa, and due to patriarchal structure of the South African society women have very high levels of dependence on men. This clearly affect their bargaining power both in the marriage market and also in control their fertility.

Model IV adds a race, SES interaction term. As has been discussed earlier, due to past segregation in access to fundamental resources Africans and non Africans have non randomly differences in SES. Only the interaction for those in the highest quartile is significant. Interestingly the interaction term decreases the odds for non-Africans quite substantially. The Odds are very close to one, which is the difference in the odds of having a non marital childbearing for Non-Africans is very close to that for Africans if differences in SES are controlled for. Furthermore, these odds ratios are statistically not significant to 1. Meaning controlling for the interaction between race and SES removes the advantage that non Africans had over Africans in their likelihood to experience a non marital birth. These results proves that the hypothesis that the racial difference in non marital childbearing between Africans and non Africans can mostly be explained by difference in Socioeconomic status, rather than cultural background as the earlier research outlined above has suggested.

The analysis for women who did not change households in the past 5 years does not change, the sizes of the coefficients changes only slightly. The odds for non whites is lower, showing that non whites are still less likely to have a non marital childbearing than compared to Africans.

**Conclusions**

Population group is an important determinant of non-marital childbearing in South Africa. However, difference in SES make the effect of population group much less, meaning differences in SES might be the determining factor. This suggest that differences between races is more structural than cultural as the earlier work on non marital fertility has focused on in South Africa. There are still big variation on the basis of SES in the country, and even though there are steps being taken towards reducing the gap, but the population at the poor end of the distribution continues to have worst outcomes. Since SES is a measure of access to social development, persisting low SES will have a negative feedback mechanism where these children born in lower SES households, will themselves have non marital births into low SES.

Although this work shed some light on non-marital fertility in the country, more research is needed to further understand the dynamics of the effect of SES among Africans. With rapid social change, more and more Africans are moving towards better access to resources that will improve their SES. A closer study at within-Africans variation would highlight the actual effect of SES on non marital childbearing on this subgroup.

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**Tables and Graphs**

Table 1: Proportion of never married woman between 1993-1998

| **Variable** | **Did not have a birth** (N=2970) | **Had a birth** (N=907) | **Total** |
|---|---|---|---|
| *Woman's age* | | | |
| 15-19 | 66.7 | 30.9 | 58.3 |
| 20-24 | 26.0 | 53.1 | 32.3 |
| 25-29 | 7.4 | 16.0 | 9.4 |
| *Population group* | | | |
| African | 78.8 | 86.4 | 80.6 |
| Non-African | 21.2 | 13.6 | 19.4 |
| *Area type* | | | |
| Urban | 56.9 | 46.9 | 54.5 |
| Rural | 43.1 | 53.1 | 45.5 |
| *Currently in school* | | | |
| Yes | 70.0 | 35.8 | 38.0 |
| No | 30.0 | 64.2 | 62.0 |
| *Highest education* | | | |
| No education | 0.8 | 1.8 | 1.1 |
| Primary | 17.7 | 15.2 | 17.2 |
| Secondary | 74.3 | 76.7 | 74.9 |
| Higher | 7.1 | 6.3 | 6.9 |
| *Currently employed* | | | |
| Employed | 12.0 | 14.3 | 12.5 |
| Not employed | 88.0 | 85.4 | 87.5 |

Table 2: Premarital childbearing prevalence rates by subpopulations

| **Variable** | **Rate** | **Variable** | **Rate** |
|---|---|---|---|
| *Woman's age* | | *Currently in school* | |
| 15-19 | 0.14 | No | 0.31 |
| 20-24 | 0.40 | Yes | 0.12 |
| 25-29 | 0.20 | | |
| *Population group* | | *Highest education* | |
| African | 0.25 | No education | 0.27 |
| Non-African | 0.23 | Primary | 0.20 |
| | | Secondary | 0.25 |
| | | Higher | 0.25 |
| *Area type* | | *Currently employed* | |
| Urban | 0.22 | Not employed | 0.25 |
| Rural | 0.27 | Employed | 0.24 |
| ***Total*** = 0.24 | | | |

**Figure2: Survivorship from having a premarital first birth for never married women**

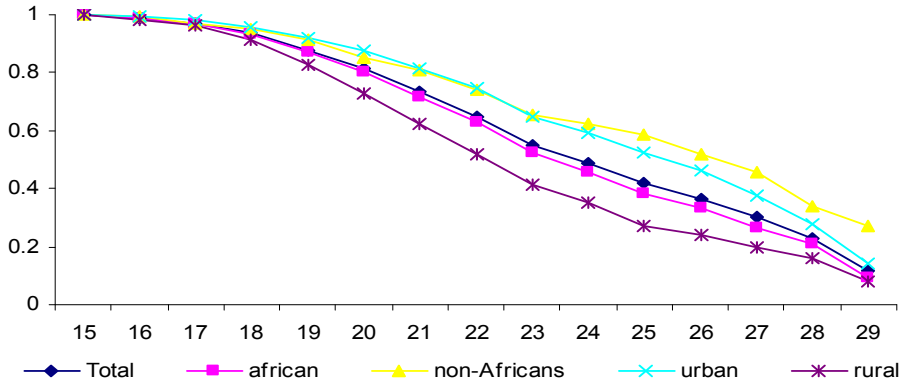


**Figure 3: Survivorship from having a premarital first birth by SES**

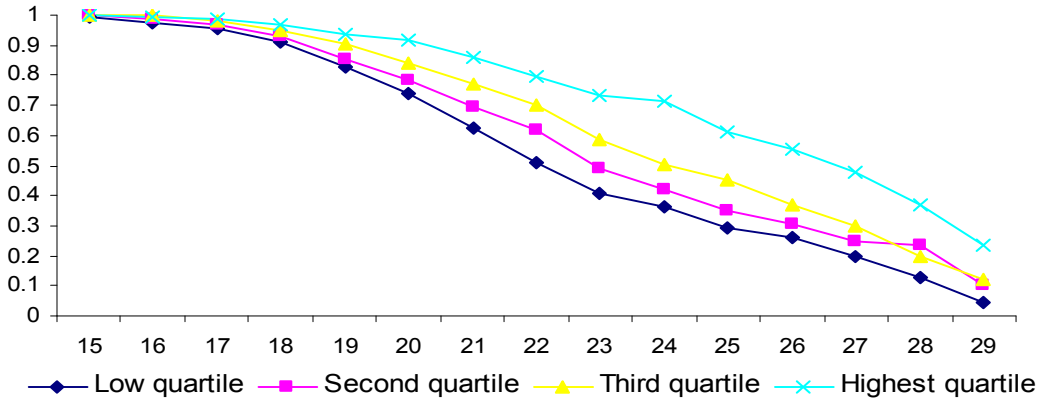

Table 3: Factor scoring from principal component factor analysis

| | Factor1 | Factor2 | Mean | SD | Factor1/SD | Factor2/SD |
|---|---|---|---|---|---|---|
| Has a radio | -.247 | .435 | 0.810 | 0.392 | -0.630 | 1.110 |
| Has a television | -.076 | .271 | 0.588 | 0.492 | -0.154 | 0.551 |
| Has a refrigerator | -.003 | .219 | 0.494 | 0.500 | -0.006 | 0.438 |
| Has a car | -.072 | .350 | 0.198 | 0.399 | -0.180 | 0.877 |
| Has a telephone | .046 | .264 | 0.250 | 0.433 | 0.106 | 0.610 |
| Has piped water | .234 | -.126 | 0.595 | 0.491 | 0.477 | -0.257 |
| Use public tap | -.310 | .166 | 0.195 | 0.396 | -0.783 | 0.419 |
| Has flush toilet | .270 | -.050 | 0.431 | 0.495 | 0.545 | -0.101 |
| Use bucket/pit laterine | -.348 | .112 | 0.431 | 0.495 | -0.703 | 0.226 |
| Has mud/plastic walls | -.023 | .049 | 0.320 | 0.466 | -0.049 | 0.105 |
| Has earth floor | .088 | .017 | 0.195 | 0.397 | 0.222 | 0.043 |
| Has bare/cement floor | -.154 | -.210 | 0.356 | 0.479 | -0.322 | -0.438 |

Table 4: Logistic regression models of the probability of having a non marital first birth within the last 5 years

| | Total sample | | | | Did not move | |
|---|---|---|---|---|---|---|
| | **Model I** | **Model II** | **Model III** | **Model IV** | **Model V** | **Model VI** |
| ***Woman's age*** | | | | | | |
| (15-19) | | | | | | |
| 20-24 | 4.78** | 3.27** | 3.45** | 3.47** | 4.10** | 4.12** |
| 25-29 | 5.5** | 2.43** | 2.78** | 2.83** | 3.61** | 3.65** |
| ***Population group*** | | | | | | |
| (African) | | | | | | |
| Non African | 0.69** | 0.53** | 0.62** | 0.95(ns) | 0.67** | 0.75(ns) |
| ***Area type*** | | | | | | |
| (Urban) | | | | | | |
| Rural | 1.79** | 1.75** | 1.66** | 1.66** | 1.61** | 1.60** |
| ***Respondent in school*** | | | | | | |
| (No) | | | | | | |
| Yes | | 0.28** | 0.30** | 0.30** | 0.34** | 0.34** |
| ***Respondent employed*** | | | | | | |
| (Not working) | | | | | | |
| Working | | 0.66** | 0.70** | 0.72** | 0.78(ns) | 0.81(ns) |
| ***Socioeconomic Index*** | | | | | | |
| (Lowest quartile) | | | | | | |
| Second quartile | | | 0.83(ns) | 0.81(ns) | 0.73** | 0.75** |
| Third quartile | | | 0.75** | 0.69** | 0.66** | 0.62** |
| Highest quartile | | | 0.49** | 0.69** | 0.56** | 0.72(ns) |
| ***Race*SES*** | | | | | | |
| (Race*first quartile) | | | | | | |
| Race*second quartile | | | | 0.70(ns) | | 1.09(ns) |
| Race*third quartile | | | | 1.169(ns) | | 1.52(ns) |
| Race*forth quartile | | | | 0.23** | | 0.37* |
| | LL = 1880.8 | LL = 1771.0 | LL = 1656.8 | LL = 1642.4 | LL = 1069.4 | LL = 1063.6 |

Omitted category in parenthesis, * Statistically significant at $p< 0.05$ , ** Statistically significant at $p< 0.01$